Board Staff Perspective on PAAA Enforcement

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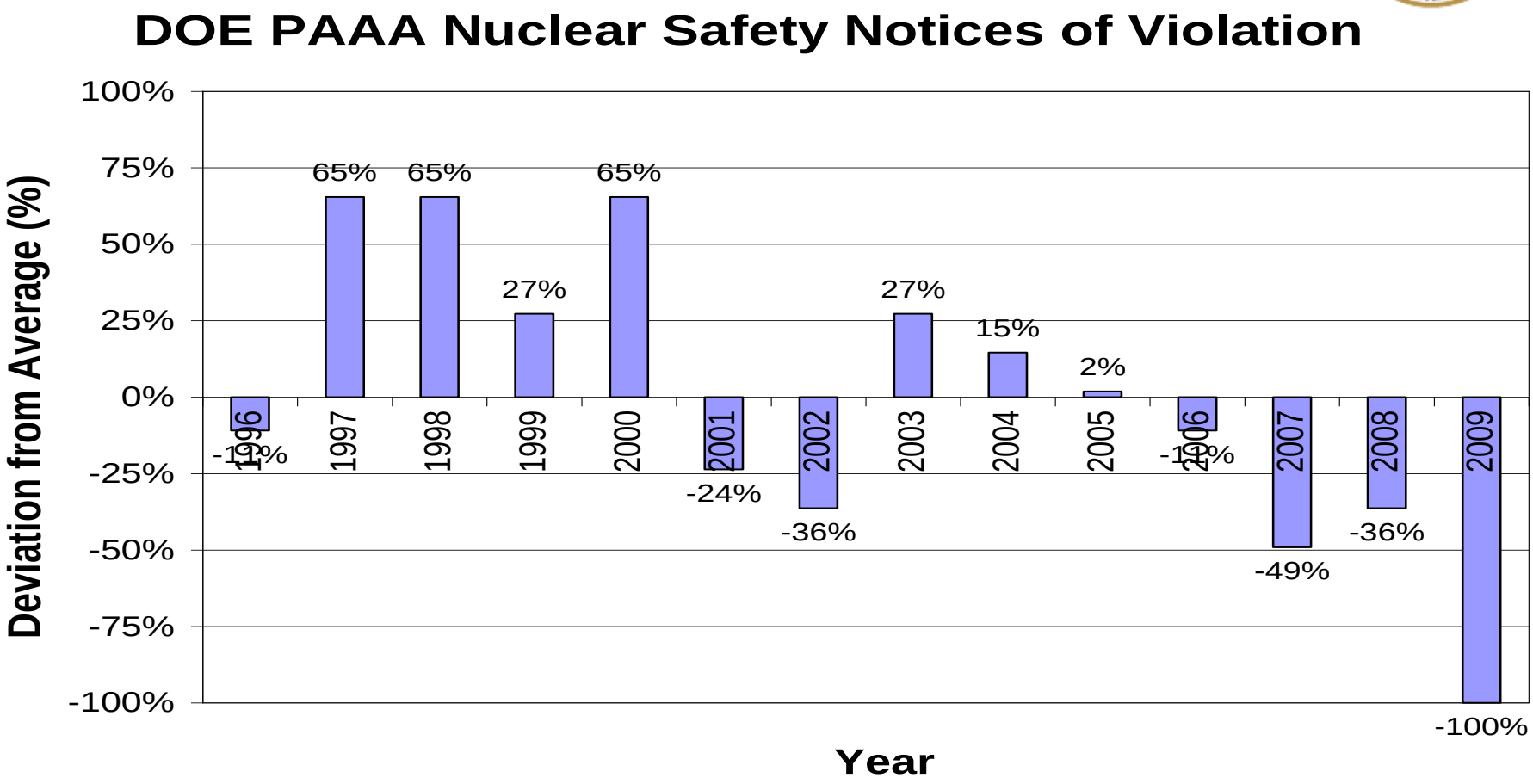
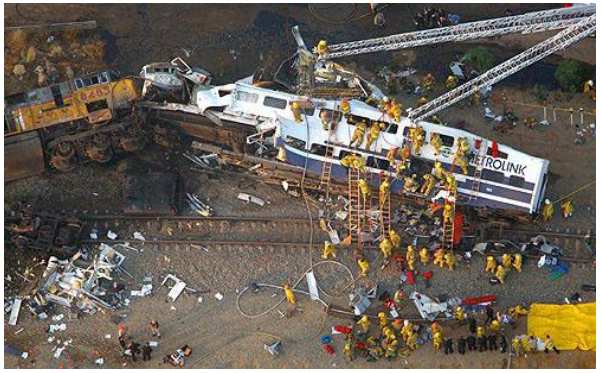
Regulatory Enforcement



- There has been a big drop in PAAA enforcement actions since 2006
- The Board is evaluating this change in enforcement patterns

Differing Perspectives

Awareness, Assurance, Oversight

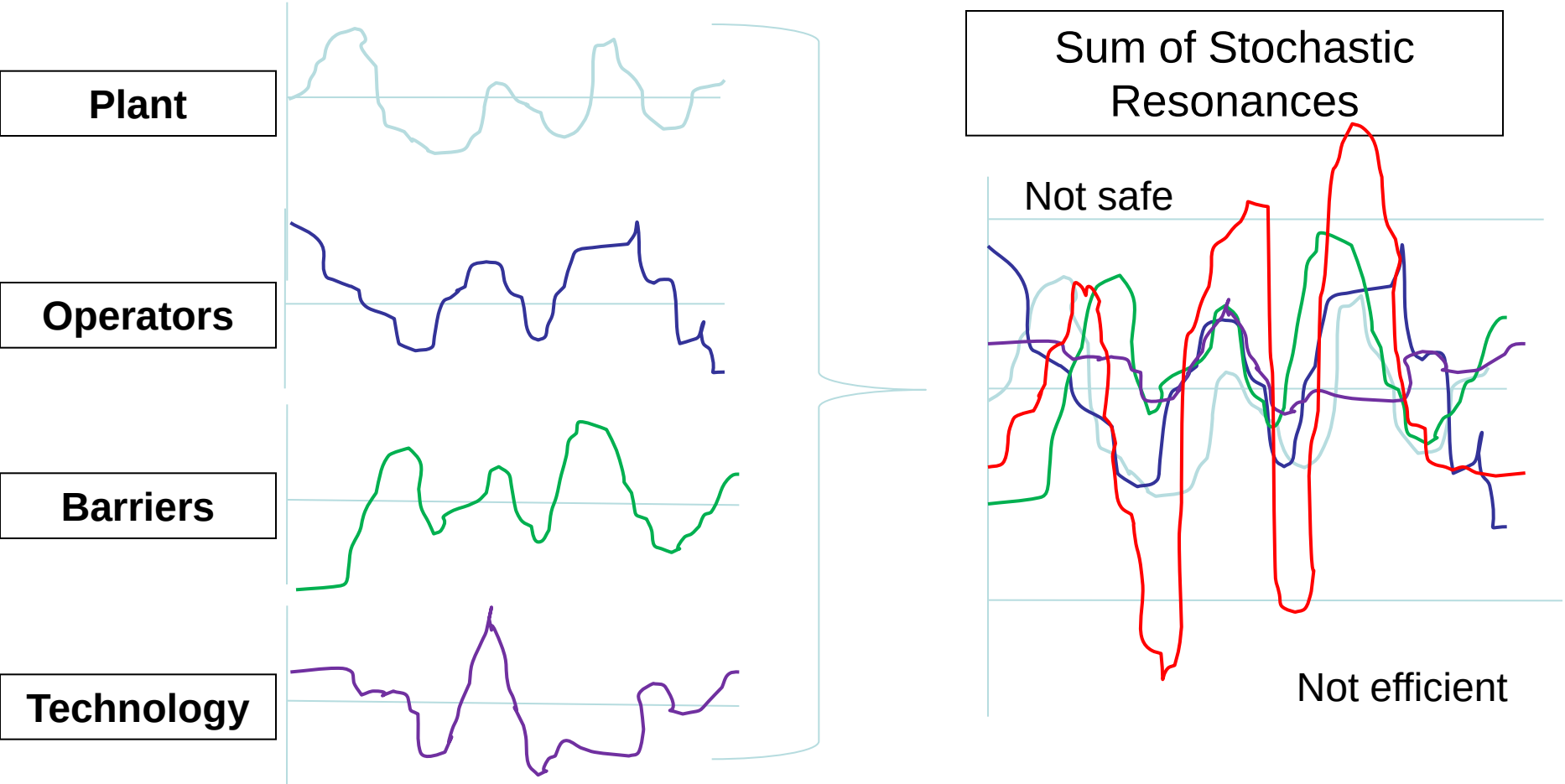


- Recent major accidents have implicated inadequate oversight
- Awareness, assurance, and oversight are vital management tools

We must not relax awareness, assurance, and oversight to improve efficiency and productivity

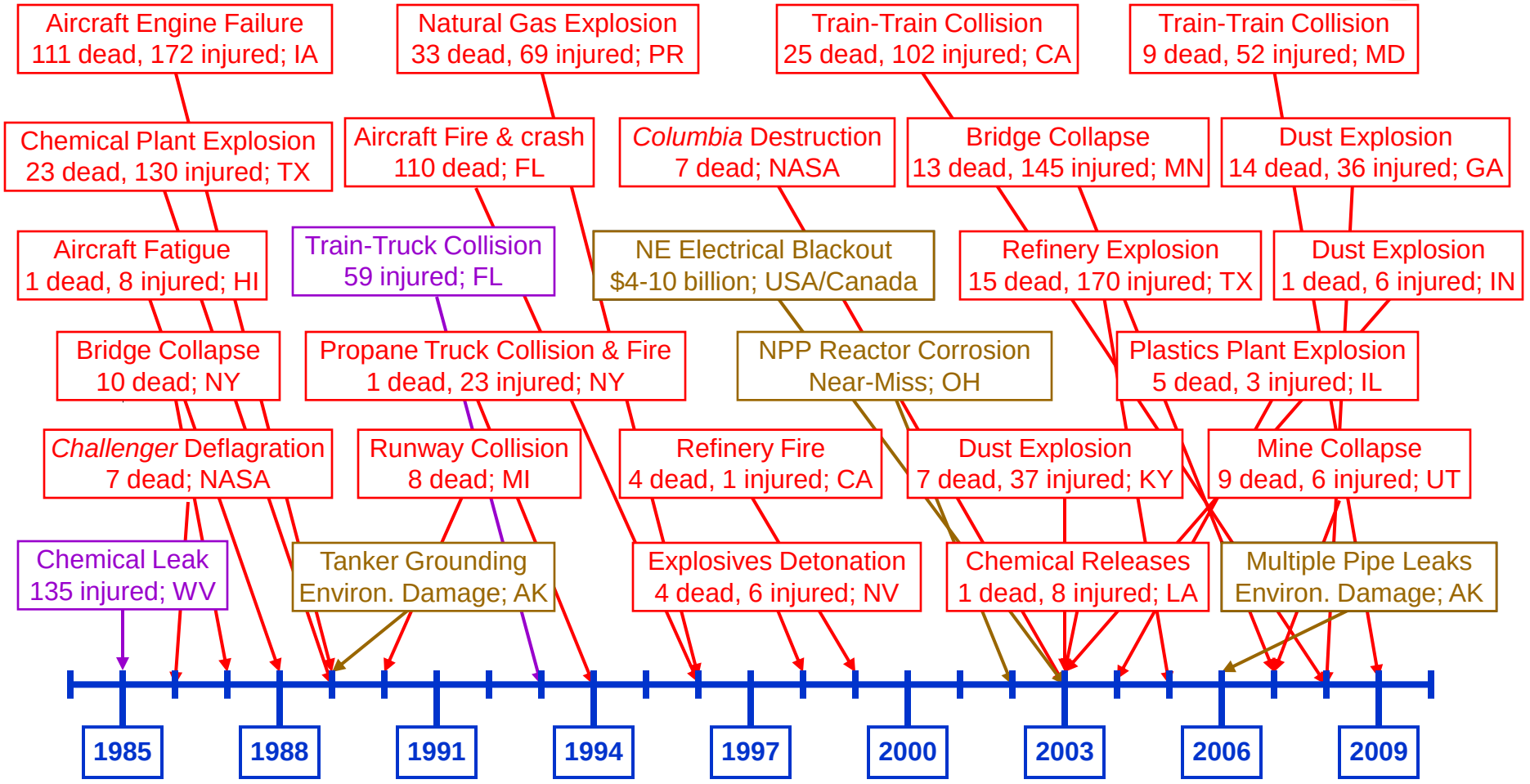
Accidents in Foresight

Functional Resonance Accident Model



Adopted from: E. Hollnagel; ***Barriers and Accident Prevention***; Ashgate Publishing Co.; Aldershot, UK. 2004.

Accidents in Hindsight



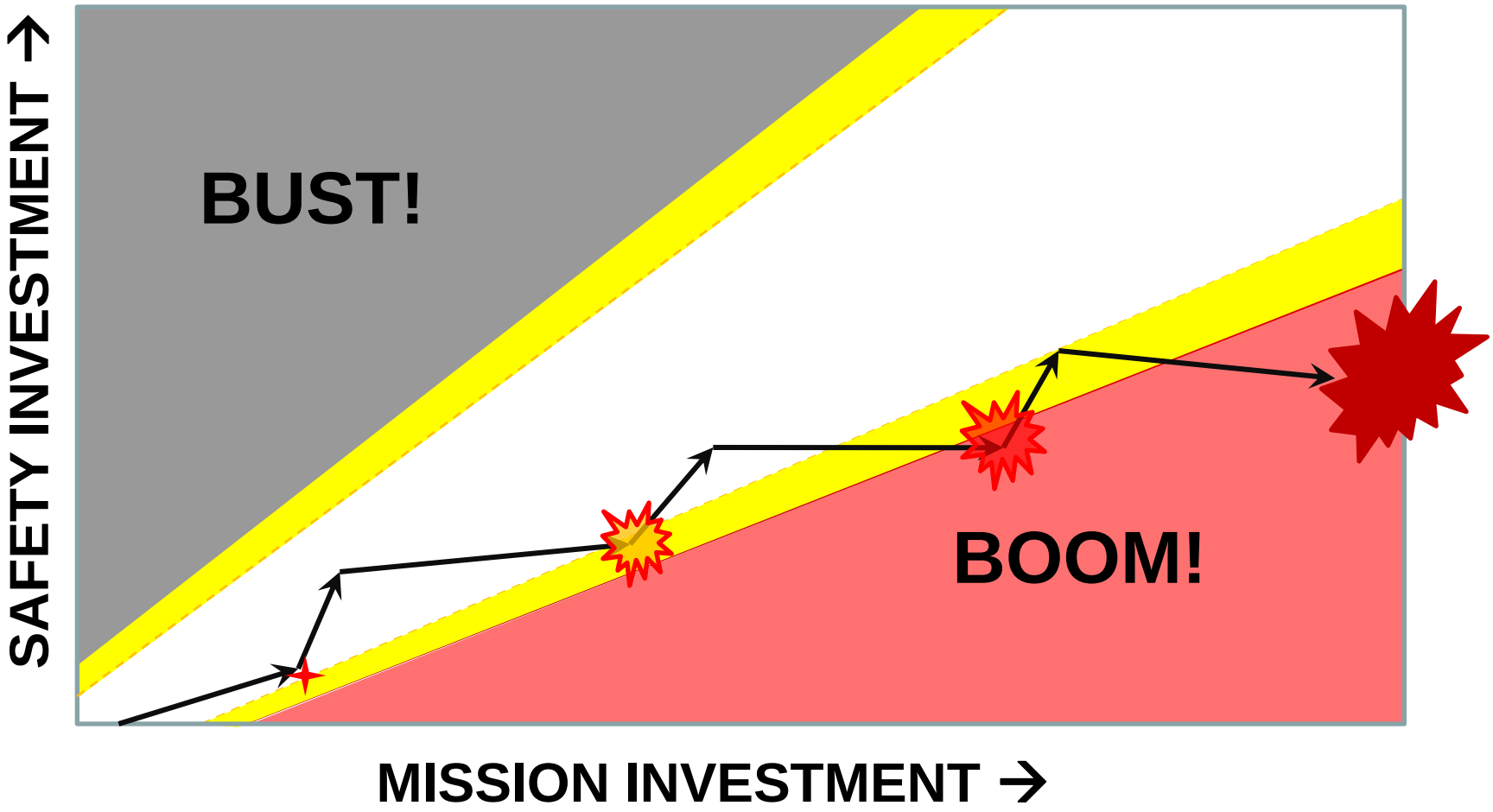
Timeline: 25 Years of US Accidents Where Failure of Foresight was causal (non-DOE)

Accidents in Foresight

Accident	Hazard analysis & control	Procedures & adherence	Reliance on "skill of the craft"	Training & competencies	Pre-job briefs	Provision and use of PPE	Lessons Learned & corrective Actions	Institutionalization of Hazard communication & control	Management involvement Oversight
Y-12 Arc Flash; June 1994									
SRS Security Rappel Tower; August 1995									
INEEL AWMC; February 1996									
LANL TA-21 Electrical Shock; April 1996									
INEEL Electrical Shock at TRA; August 1996									
LANL TA-53 Electrical Shock; August 1996									
K-33 Welder Fatality; February 1997									
Hanford PFP Chemical Explosion, May 1997									
BNL Construction Fatality; June 1997									
INEEL CO_2 Release; July 1998									
Oak Ridge Special Agent Fatality; April 1999									
Y-12 NaK Explosion; December 1999									
LANL TA-55 Pu; Uptake March 2000									
FERMI Drill Rig Accident; August 2001									
LANL Acid Vapor Inhalation; June 2005									
SNL Sled Track Accident; October 2008									
Hanford Employee Fall Injury; July 2009									

Red – Process not followed; Yellow – process inadequate/ineffective; Dark red – fitness-for-duty issues; Blue – not causal factor

Maintain a Balanced Course



A modified “Reason Model” -- from Reason, 1997 and Starbuck, 1988.

Pattern of Declining Safety

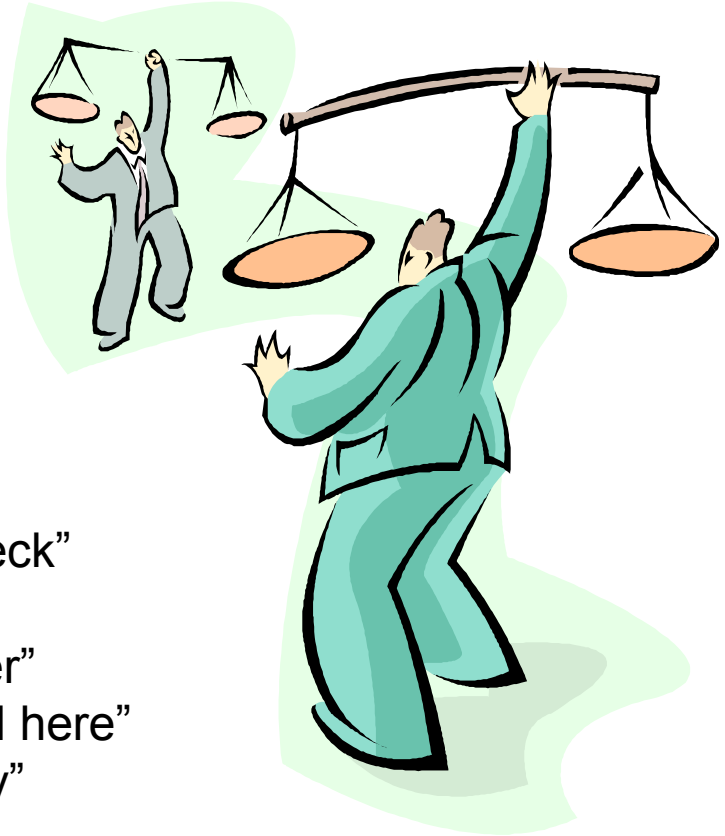
1. ***Over-confidence.*** A result of good past performance and unjustified self-satisfaction
2. ***Complacency***. Minor events begin to occur but are not adequately assessed; oversight begins to be weakened due to self-satisfaction
3. ***Denial***. More significant events begin to occur; negative oversight findings tend to be rejected as invalid; corrective actions not systematically carried out, improvement programs not completed
4. ***Danger***. A few potentially severe events occur; organization consistently rejects criticisms; oversight afraid to confront management
5. ***Collapse***. Problems become clear for all to see; management is overwhelmed and usually needs to be replaced

Source: IAEA, INSAG-13

Efficiency-Thoroughness Trade Off

Managers and workers are always faced with multiple, changing, and often conflicting goals in the workplace. They are constantly faced with the ETTO challenge:

> "How do I get the task done efficiently as possible while being as thorough as necessary."



The ETTO decision can be seen in:

- "I cannot afford to do both this year"
- "It's not quite right but close enough"
- "This always works, no need to double check"
- "If it's not right somebody else will catch it"
- "Let's keep moving, we'll deal with this later"
- "Don't worry, nothing ever happens around here"
- "I'm not sure but I think this is the right way"

(E. Hollnagel)

PAAA Amendment

- "The Secretary shall have the power to compromise, modify or remit, with or without conditions, such civil penalties…"
- In determining the amount of any civil penalty … the Secretary shall take into account:
  - The nature, circumstances, extent and gravity of the violation(s)
  - Any history of prior such violations
  - The degree of culpability
  - And other "matters as justice may require"

DOE's Procedural Rule

In 10 CFR 820 DOE established its principles for its regulatory enforcement program:

- An expectation for openness and honesty
- Voluntary self-reporting of issues
- Multiple significance levels for grading severity
- Mitigation for timely self-identification and proactive evaluation and correction of issues
- Escalation of fines when necessary for recalcitrant contractors, extended violations, recurring problems or ineffective corrections

DOE's Obligations

In this framework DOE also has obligations to the contractors:

- Timely reviewing and responding to issues
- Technical and legal accuracy in its evaluations
- Fairness in its decisions
- Provide examples of appropriate and inappropriate behaviors through its decisions
- Consistency in its approach, and
- Immediate and visible response to self-disclosing events and recalcitrant contractors

Lessons from BP

Don't think you are lucky if you have a weak regulator. In fact, do not tolerate ineffective regulation or oversight.

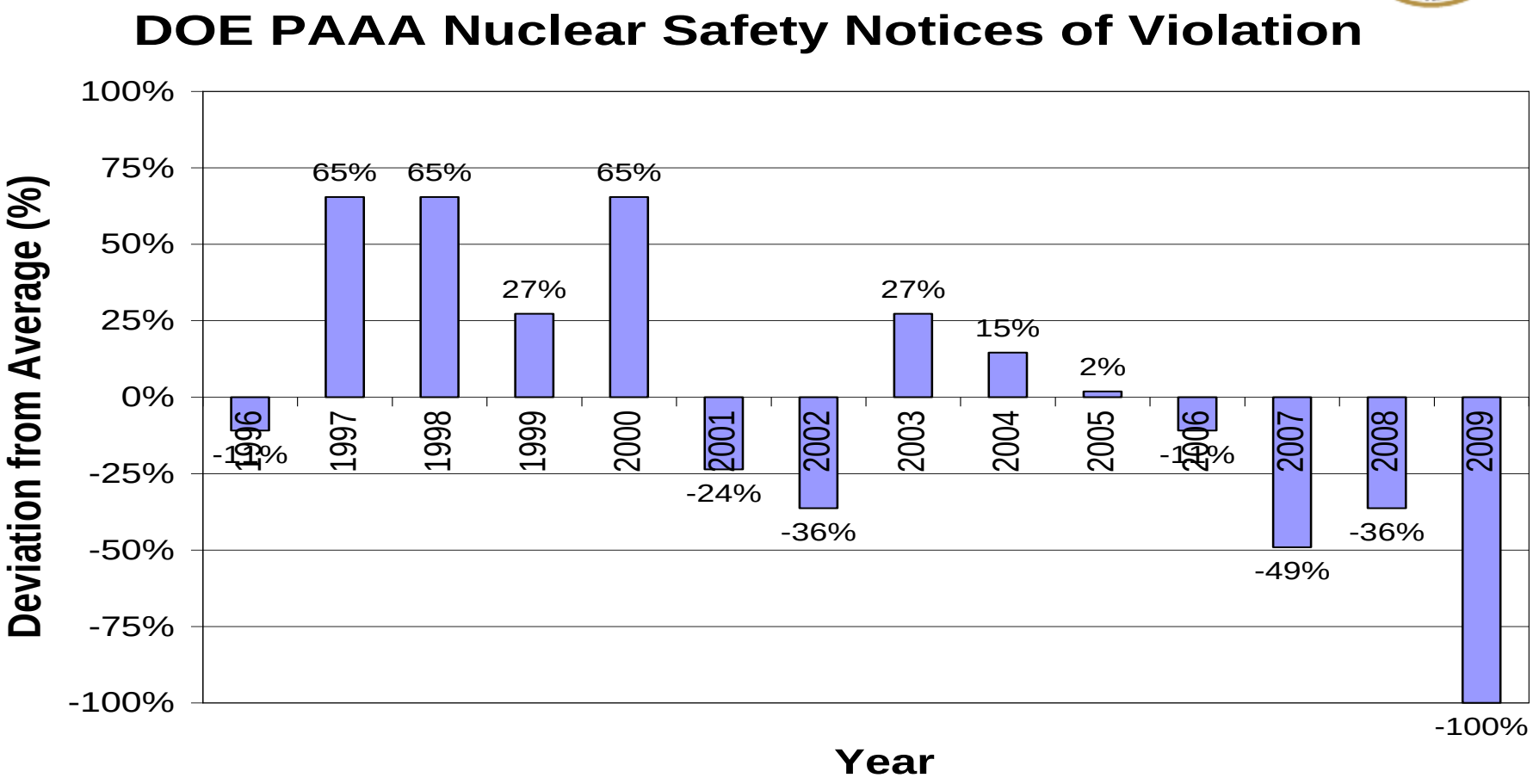
- It may seem that the customer is a sucker, but you will pay for the accident. Ask BP if they agree.

Do not tolerate confusing and changing lines of responsibility and control

Do not be forced to make last minute decisions on uncertain information

Stay away from the "risk-reward" curve

Regulatory Enforcement



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